

Appl. No. 10/829,053
Reply to Office action of 06/17/2005

REMARKS

Reconsideration of the above-referenced application in view of the above amendment, and of the following remarks, is respectfully requested.

Claims 1-5, 7-13, 17-21, 23-30, and 32 are pending in this case. Claims 1, 17, and 30 are amended herein and claims 6, 22, and 31 are cancelled herein.

The Examiner rejected claims 30-32 under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 30 is amended to overcome the rejection by deleting "planarized" prior to "ferroelectric dielectric" and replacing "planarizing" with ~~planarized~~. Accordingly, Applicant requests that the rejection be withdrawn.

The Examiner rejected claims 1-2, 5-7, 12-13, 17-18, 21-23, 28-31 under 35 U.S.C. 102(e) as being anticipated by Nagata (U.S. Patent 6,232,174).

Applicant respectfully submits that amended claim 1 is unanticipated by Nagata as there is no disclosure or suggestion in the reference of cleaning the planarized ferroelectric dielectric layer prior to forming the second electrode layer. Nagata teaches forming a lower electrode material, forming and SBT film, performing a surface-flattening process and forming an upper electrode material. Nagata does not disclose or suggest cleaning the planarized ferroelectric dielectric prior to forming the second electrode layer. The only step taught by Nagata between the surface-flattening step and the depositing of the upper electrode material is a heat treatment to repair the damage from an etch (col 6, lines 26-30). Accordingly, Applicant respectfully submits that claim 1 and the claims dependent thereon are unanticipated by Nagata.

Appl. No. 10/829,053
Reply to Office action of 06/17/2005

Applicant respectfully submits that claims 7 and 30, and the claims dependent thereon are similarly unanticipated by Nagata.

The Examiner rejected claims 3-4, 8-11, 19-20, 24-27, 32 under 35 U.S.C. § 103(a) as being unpatentable over Nagata and Gilbert (U.S. 2001/0044205).

Applicant respectfully submits that claims 3-4, 8-11, 19-20, 24-27, 32 are patentable over Nagata and Gilbert for the same reasons discussed above relative to claims 1, 7, and 30, from which these claims depend.

Applicant also questions whether Gilbert may properly be used to reject the claims in this case. The claimed invention is assigned to Texas Instruments Incorporated and was subject to an agreement to assign the invention to Texas Instruments Incorporated at the time the invention was made. Gilbert is assigned to Texas Instruments Incorporated and Agilent Technologies. Gilbert was made by or on behalf of parties to a joint research agreement that was in effect on or before the date the claimed invention was made. Gilbert was made as a result of activities undertaken within the scope of the joint research agreement and Gilbert discloses the names of the parties to the joint research agreement.

Applicant respectfully submits that claims 3 and 19 are further patentable as the references fail to disclose or suggest the substantially planar ferroelectric dielectric layer having an average surface roughness of less than about 1 nm.

Applicant respectfully submits that claims 4 and 20 are further patentable as the references fail to disclose or suggest the substantially planar ferroelectric dielectric layer having an average surface roughness of less than about 0.5 nm.

Appl. No. 10/829,053
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Applicant respectfully submits that claims 8 and 24 are further patentable as the references fail to disclose or suggest planarizing at least a portion of the second electrode layer to form a planarized second electrode layer prior to forming the second protective layer.

Applicant respectfully submits that claims 9 and 25 are further patentable as the references fail to disclose or suggest cleaning the planarized second electrode layer prior to forming the second protective layer.

Applicant respectfully submits that claims 10 and 26 are further patentable as the references fail to disclose or suggest planarizing at least a portion of the first electrode layer to form a planarized first electrode layer prior to forming the ferroelectric dielectric layer.

Applicant respectfully submits that claims 11 and 27 are further patentable as the references fail to disclose or suggest cleaning the planarized first electrode layer prior to forming the ferroelectric dielectric layer.

In light of the above, Applicant respectfully requests withdrawal of the Examiner's rejections and allowance of claims 1-5, 7-13, 17-21, 23-30, and 32. If the Examiner has any questions or other correspondence regarding this application, Applicant requests that the Examiner contact Applicant's attorney at the below listed telephone number and address.

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Respectfully submitted,



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